AMENDMENTS TO THE CLAIMS

1. (Amended) A method for improving a network connection in a wireless network, said method comprising the steps of:

determining at least one quality measure for a channel of said network connection;

estimating a quality condition for said channel based on said at least one quality measure; and

selecting a packet type to be transmitted over said channel based on said quality condition;

wherein a size and a coding of said selected packet type are dependent upon one another.

2. (Original) The method according to claim 1, wherein said at least one quality measure is determined from a receiver side in said network.

3. (Original) The method according to claim 1, wherein said at least one quality measure is determined from a transmitter side in said network.

4. (Original) The method according to claim 3, wherein said step of estimating a quality condition comprises ignoring receiver side quality measures and using only quality measures determined from said transmitter side.

5. (Original) The method according to claim 1, wherein which one of said at least one quality measure is determined varies depending on a previously selected packet type.

6. (Original) The method according to claim 1, wherein an uncoded packet type is selected if said channel is primarily interference limited.

7. (Original) The method according to claim 1, wherein a coded packet type is selected if said channel is primarily noise limited, .

8. (Original) The method according to claim 1, wherein a relatively short packet type is selected if said channel has a high bit error rate.

9. (Original) The method according to claim 1, wherein a relatively long, uncoded packet type is selected if said channel is neither interference limited nor noise limited.

10. (Original) The method according to claim 1, wherein said selected packet type is the same as a previously selected packet type.

11. (Original) The method according to claim 1, wherein said selected packet type is different from a previously selected packet type.

12. (Original) The method according to claim 1, wherein said network is an ad hoc network.

13. (Original) The method according to claim 1, wherein said network is a Bluetooth (TM) wireless network.

14. (Original) The method according to claim 1, wherein said step of estimating said quality condition includes comparing said at least one quality measure to a predefined value.

15. (Original) The method according to claim 1, wherein said step of selecting a packet type includes waiting for a predefined time period before selecting said packet type.

16. (Original) The method according to claim 1, wherein at least an error detection quality measure is used to estimate said channel condition.

17. (Original) The method according to claim 1, wherein at least a Forward Error Correction quality measure and an error detection quality measure are used to estimate said channel condition.

18. (Original) The method according to claim 1, wherein at least a received signal strength quality measure and an error detection quality measure are used to estimate said channel condition.

19. (Original) The method according to claim 1, wherein at least a packets positively acknowledged quality measure and a power amplifier voltage are used to estimate said channel condition.

20. (Original) The method according to claim 19, wherein said packets positively acknowledged quality measure and said power amplifier voltage are determined based partly on at least one of an error detection quality measure, a Forward Error Correction quality measure, and a received signal strength quality measure.

21. (Amended) A communications device for communicating over a network connection in a wireless network, said device comprising:

a channel quality processor for determining at least one quality measure of a channel of said network connection;

a channel condition processor coupled to said channel quality processor for estimating a quality condition of said channel based on said at least one quality measure; and

a packet type selector coupled to the channel condition processor for selecting a packet type to be transmitted over said channel based on said quality condition of said channel;

wherein a size and a coding of said selected packet type are dependent upon one another.

22. (Original) The communications device according to claim 21, further comprising a receiver unit, wherein said at least one quality measure is determined based on information obtained from said receiver unit.

23. (Original) The communications device according to claim 21, further comprising a transmitter unit, wherein said at least one quality measure is determined based on information obtained from said transmitter unit.

24. (Original) The communications device according to claim 23, wherein said channel condition processor is configured to ignore receiver side quality measures and to use only quality measures determined based on information obtained from said transmitter unit.

25. (Original) The communications device according to claim 21, wherein which one of said at least one quality measure is determined varies depending on a previously selected packet type.

26. (Original) The communications device according to claim 21, wherein said packet type selector selects an uncoded packet type if said channel condition processor determines that said channel is primarily interference limited.

27. (Original) The communications device according to claim 21, wherein said packet type selector selects a coded packet type if said channel condition processor determines that said channel is primarily noise limited.

28. (Original) The communications device according to claim 21, wherein said packet type selector selects a relatively short packet type if said channel condition processor determines that said channel has a high bit error rate.

29. (Original) The communications device according to claim 21, wherein said packet type selector selects a relatively long, uncoded packet type if said channel condition processor determines that said channel is neither interference limited nor noise limited.

30. (Original) The communications device according to claim 21, wherein said selected packet type is the same as a previously selected packet type.

31. (Original) The communications device according to claim 21, wherein said selected packet type is different from a previously selected packet type.

32. (Original) The communications device according to claim 21, wherein said network is an ad hoc network.

33. (Original) The communications device according to claim 21, wherein said network is a Bluetooth (TM) wireless network.

34. (Original) The communications device according to claim 21, wherein said channel condition processor is configured to compare said at least one quality measure to a predefined value.

35. (Original) The communications device according to claim 21, further comprising a timer, wherein said packet type selector is adapted to wait for said timer to expire before selecting said packet type.

36. (Original) The communications device according to claim 21, wherein at least an error detection quality measure is used to estimate said channel condition.

37. (Original) The communications device according to claim 21, wherein at least a Forward Error Correction quality measure and an error detection quality measure are used to estimate said channel condition.

38. (Original) The communications device according to claim 21, wherein at least a received signal strength quality measure and an error detection quality measure are used to estimate said channel condition.

39. (Original) The communications device according to claim 21, wherein at least a packets positively acknowledged quality measure and a power amplifier voltage are used to estimate said channel condition.

40. (Original) The communications device according to claim 39, wherein said packets positively acknowledged quality measure and said power amplifier voltage are determined based partly on at least one of an error detection quality measure, a Forward Error Correction quality measure, and a received signal strength quality measure.

41. (New) The method according to claim 1, wherein said at least one quality measure includes a noise quality measure and an interference quality measure, further comprising:

determining a limiting factor for said channel based on said noise quality measure and said interference quality measure;

optimizing a first parameter of said packet type, said first parameter related to either said noise quality measure or said interference quality measure, whichever is indicative of said limiting factor; and

minimizing a second parameter of said packet type, said second parameter related to either said noise quality measure or said interference quality measure, whichever is not indicative of said limiting factor.